Preferred Partner Energy Calculator (PPEC) User Manual

Lockheed Martin Corporation
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1. Introduction

The Preferred Partner Energy Calculator (PPEC) application is used by the Preferred Partner Network (PPN) and energy efficiency program administrators to calculate estimated energy savings from upgrading existing equipment in customer facilities.

The PPEC contains a comprehensive list of light fixtures, room types, and controls to calculate utility incentive payments, energy savings, and payback periods of upgraded equipment. Through the PPEC, the PPN can define buildings, rooms, operating schedules, and utility rates to determine the best combination of building upgrades to maximize the savings that a customer can see for their facilities as well as the incentive associated with that project.

The PPEC is capable of operating either online or offline to give the PPN user maximum flexibility in assessing customer locations and facilities. In the offline mode, all changes to projects are tracked and later uploaded to the cloud for sharing with other personnel within the PPN's own company. In both modes, the PPEC tracks a PPN's favorite lighting fixtures for use across multiple projects and syncs them to the cloud for easy access.

The PPEC can export the list of energy conservation measures of a project to a .PDF document. The PPEC also tracks updates to the project showing what was originally submitted, what was approved, and what was actually installed during the execution of the project.

The following sections describe how to complete basic tasks including creating a project, entering measures, and viewing results.

2. Project Overview

A project is a way for a utility customer to make improvements to their building, estimate the savings from their utility bill, and also participate in utility sponsored incentive programs. The graphic below (Figure 1) shows the process and lifecycle of a project.

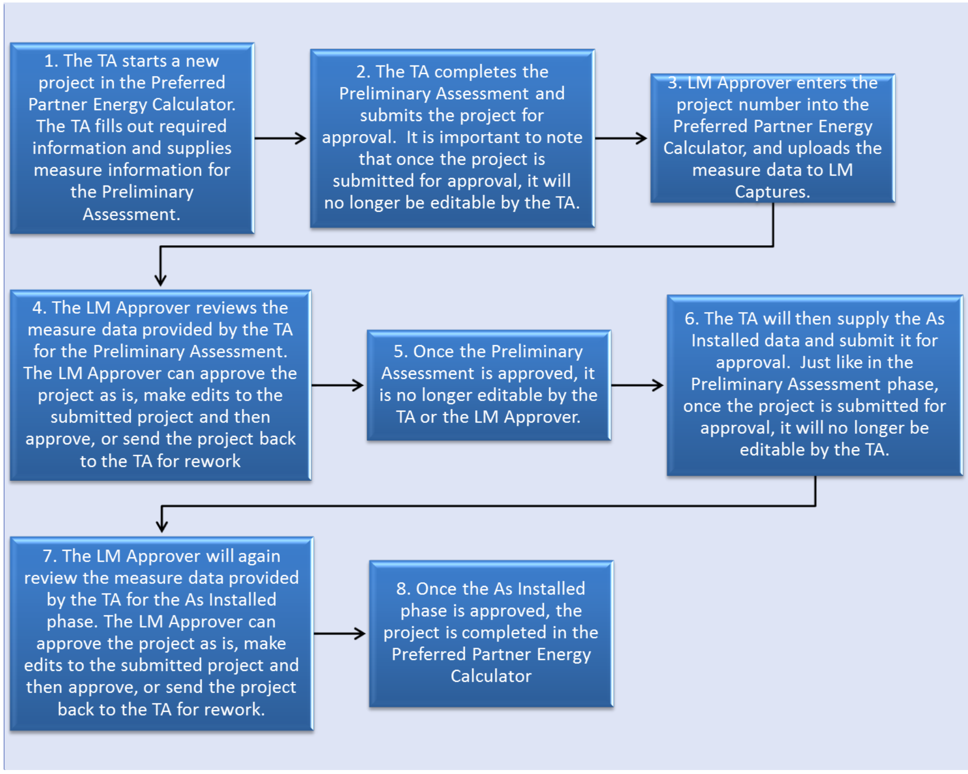


Figure 1 - Project Lifecycle

2.1 PPN User Role

2.1.1 Preferred Partner Network Role

The PPN can create new projects, edit existing projects not yet submitted, submit projects, and delete projects that haven't yet been submitted for approval. A PPN can only see and edit projects that have been created by other users within their company with the same PPN. It is important to note that once a project has been submitted for approval, a PPN can no longer edit the project.

David Gajewski 11/25/2014 12:59 PM
Comment [1]: #6 should say input rather than supply

3. Starting The Preferred Partner Energy Calculator

To start the Preferred Partner Energy Calculator application, double click on the desktop icon. If your computer is connected to the internet, the application starts in online mode and the PPEC will ask for your username and password. If your computer is not connected to the internet, the application starts in offline mode.

After starting in either online or offline mode, you'll be taken to the project list screen (Figure 2).

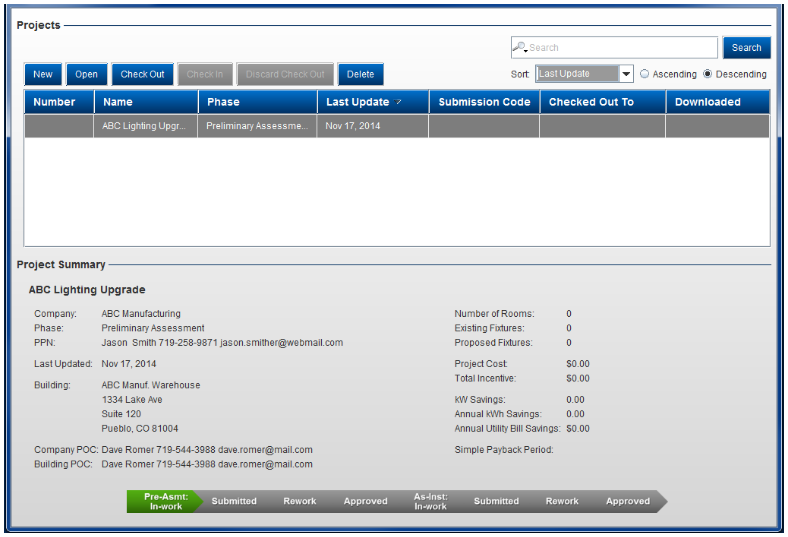


Figure 2 - Project List Screen

From the project list screen you can see the projects that are currently in work, those that have been downloaded to your machine, and (for online mode only) those that are on the server. You can create new projects and open projects that have been checked out to you. The project list screen and the individual project windows will have different functionality in online and offline mode. Differences in functionality will be pointed out in applicable sections.

4. Project List Screen

The project list screen is your starting point for the PPEC. From the project list screen you will be shown a list of the projects that are available to you. As a PPN, you are only able to see projects that are being worked on by your company.

The project list screen is divided into several sections. Each functionality is explained below.

4.1 Project List Screen Buttons

The top of the screen contains a row buttons to create a new project, open an existing project, check out and check in an existing project, Discard(release) a checked out project, and delete a project.

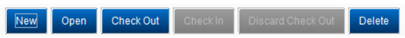


Figure 3 - Project Screen Buttons

4.1.1 Create a New Project

Pressing the new project button opens a blank project window (Figure 4).

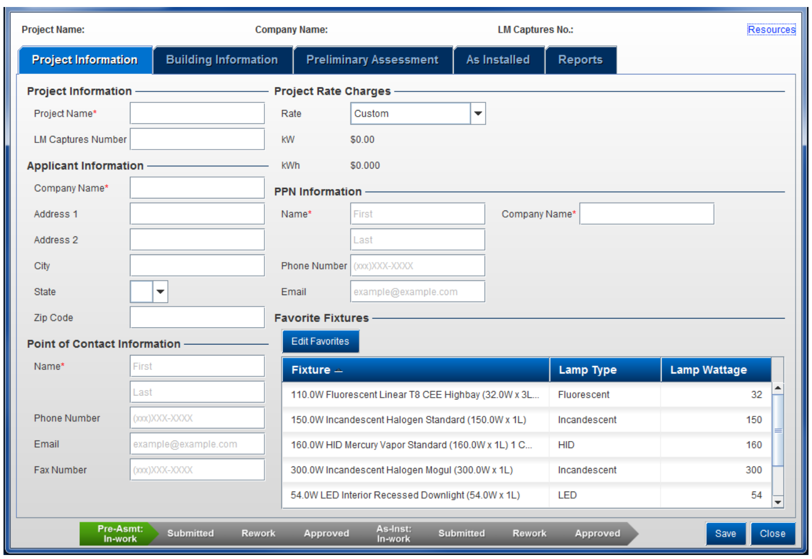


Figure 4 - Blank Project

From here you can populate the associated fields with project specific information. You can save the project or close the window without saving. The individual project window tabs and screens will be detailed in following sections. The new project will not be visible to other users until you have checked it in.

4.1.2 Open a Project

You can open an existing project by double clicking it from the project list, right clicking and choosing open, or highlighting the project and clicking the open button above the list. If the project isn't checked out by another user, it will be checked out to you. With the project checked out you can edit the project and save the changes. It is important to note that if the project is checked out to a different user, or if it has been submitted for approval, it will be opened in read only mode. In read only mode you can view all of the information in the project, but are not able to change it.

While the project is checked out to you other users will not be able to make any changes. Any updates that you've made will not be viewable by other users until the project is checked in.

4.1.3 Check Out a Project

You are able to check out a project without opening it by highlighting a project and clicking the check-out button above the list. Checking out the project will download a local copy of the project to your computer and prevent other users from editing the project online. The local copy enables you to edit the project when you are offline and unable to connect to the Internet. In the project list, a checkmark will be present indicating the project is downloaded on your machine and ready to be edited online or offline.

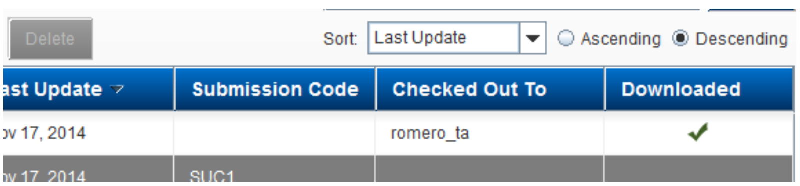


Figure 5 - Checked Out Project

Again, when a project is checked out it will not be editable to other users and they will only be able to view the project in read only mode.

When you submit a project for approval, it will automatically be checked in and be locked from editing by all PPNs.

4.1.4 Check In a Project

When you check in a project, your changes are uploaded to the server and are viewable by other users. If you are checking in a new project, it will then be visible to other users. If a project is checked in, the local copy (on your computer) is removed and will not be accessible in offline mode.

Note: It is important to remember to check out a project prior to going offline to a customer site.

4.1.5 Discard a Checkout

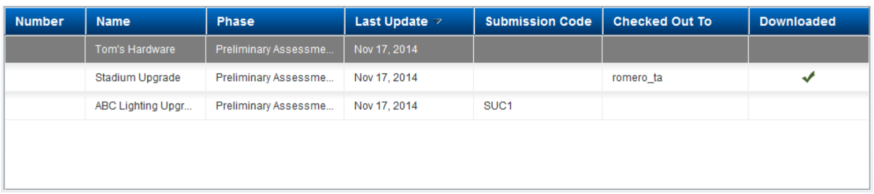
You can discard a checkout if you don't want to upload the changes you've made to your project. When you discard your checkout, the project will be shown as checked in and any changes that you've made will be lost.

4.1.6 Delete a Project

You can delete a project that hasn't been submitted during the Preliminary Assessment phase. Once a project has been a submitted, it can only be deleted by an EnergyRight program administrator. It will be removed from the project list and will no longer exist on the server. Deleted projects cannot be recovered.

4.2 Project List

The Project List shows a list of all projects that have either been downloaded to your computer, or projects that other users from your company created that are located on the server. You can only edit a project that is downloaded to your machine and checked out. When a project is checked out, it will not be editable by anyone but you until you check it back in. The project list will show the username of the person that has the project checked out.



Number	Name	Phase	Last Update	Submission Code	Checked Out To	Downloaded
	Tom's Hardware	Preliminary Assessme...	Nov 17, 2014			
	Stadium Upgrade	Preliminary Assessme...	Nov 17, 2014		romero_ta	✓
	ABC Lighting Upgr...	Preliminary Assessme...	Nov 17, 2014	SUC1		

Figure 6 - Project List

The project list will also show if the checked out project has been downloaded to your machine. If you are planning to go to a customer location where you don't have internet access, it is important to download the project prior to disconnecting.

4.3 Project Summary

The project summary panel gives you a quick view of the project information, contact information, and what incentives have been calculated up to that point in the project lifecycle. The information is available to you without having to download and open a project.

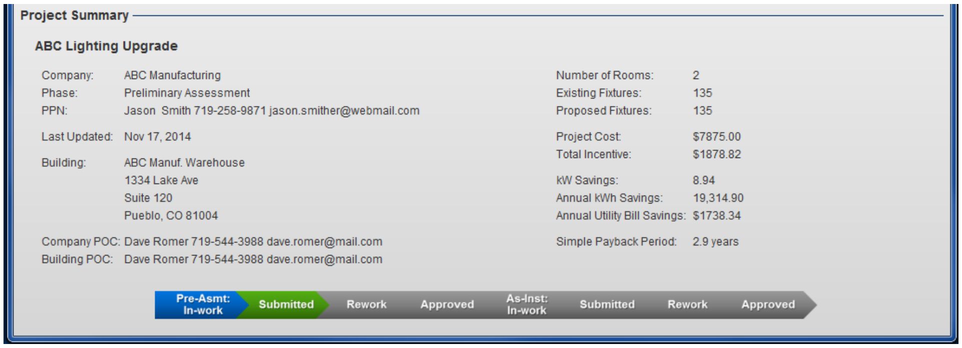


Figure 7 - Project Summary

The information that is displayed in the project summary panel is updated when you change the information in the project window.

4.4 Project Status Tracker

The progress status tracker will show you where the project is in its lifecycle. Each phase is described below.

4.4.1 Preliminary Assessment: In-work

Figure 8 - Preliminary Assessment: In Work

This is the first phase of a project. When you start a new project, it will automatically be in the **Pre-Asmt: In-work** state. It is in this phase of the project that all of the initial information is supplied such as the name of the project, the company, contact information, and Preferred Partner Network (PPN) information. In this phase you will also define the energy costs that are to be used, the building address and schedules, and create and edit your list of favorite fixtures (if you haven't already done so as part of another project).

Note: Your favorite fixtures list can be edited at any time.

In the Preliminary Assessment phase, before a project is submitted, you will supply the measure information for the upgrades that are being made to the building.

4.4.2 Preliminary Assessment: Submitted

Figure 9 - Preliminary Assessment: Submitted

After you have completed your Preliminary Assessment, you will submit the project for review and approval. Once you have submitted the project, you won't be able to edit it. You can still view the project in read only mode. During the **Submitted** state, your project can either be adjusted/approved by administers of the EnergyRight program or it can be sent back to you for rework.

4.4.3 Preliminary Assessment: Rework

Figure 10 - Preliminary Assessment: Rework

If the EnergyRight program has requested your assistance in the rework of a project, it will be shown as in the **Rework** state. The project is once again editable by you and will need to be resubmitted for approval after you have made your changes. Again, once it is submitted, you will no longer be able to make changes to the project.

4.4.4 As Installed: In-work

Figure 11 - As Installed: In-work

When the scope of work of a project in the Preliminary Assessment phase is approved, the tracker will go straight to the **As Installed: In-work** state. It is in this phase that you will supply any As Installed, updated measure information for the measures installed in the building. You'll see that the information from the approved Preliminary Assessment has been carried over to the As Installed phase. Your project will remain in the As Installed phase until you submit it for approval.

4.4.5 As Installed: Submitted

Figure 12 - As Installed: Submitted

Similar to the Preliminary Assessment phase, once you submit a project for approval you will not be able to edit the project unless it is sent back to you for rework. During the **Submitted** state, your project can either be adjusted/approved by administers of the EnergyRight program or it can be sent back to you for rework.

4.4.6 As Installed: Rework

Figure 13 - As Installed: Rework

The **Rework** state during the As Installed phase is the same as in the Preliminary Assessment phase. When you have completed updating the information for the As Installed phase, you can resubmit the project. Once the project is submitted for approval, you will no longer be able to edit the project.

4.4.1 As Installed: Approved

Figure 14 - As Installed: Approved

Approved is the final state of a project. Once the As Installed phase has been approved, there are no additional actions to be taken in the Preferred Partner Energy Calculator. No entries in the project can be changed and all of the reports and calculations are finalized.

4.5 Project List Screen – Offline

If your computer does not have access to the Internet, the Preferred Partner Energy Calculator will be operating in offline mode. In the offline mode, you will only have access to projects that you had checked out and downloaded when previously online. When offline, certain buttons will be grayed out and non-functional indicating that feature is not available offline. You will only be able to open downloaded projects or create new projects.

5. Project Window

The project window (figure 25) is where you will enter all of your project information. It is divided up into multiple tabs for ease of navigation and follows the project lifecycle that was shown in Figure 1. All fields with a red (*) indicate that they are required. The PPEC will check to see that all of the required fields are filled out when you submit the project for approval. The following error dialog will appear indicating what required fields are still blank.

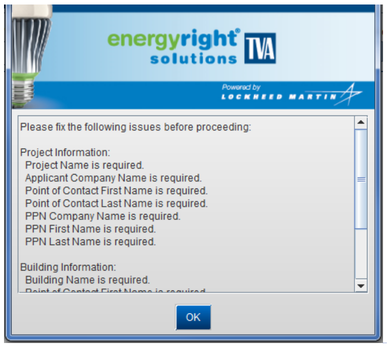


Figure 15 - Required Fields

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Comment [2]: Needs to be updated with new name and icon

At the top right of the project window is a "Resources Link". Clicking on this link will open the resources window and it will show important information that you can reference for your project, including a link to the User Manual (Figure 16).

The bottom right of the window has the save and close buttons. You will be prompted to save the project if you have not previously saved it, or if you have made changes since your last save. You can also discard any changes if you don't want to save your project.

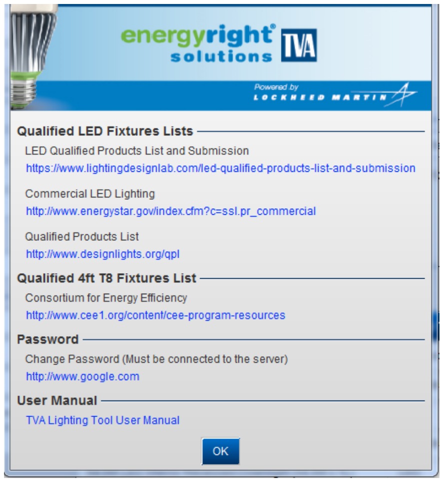

Figure 16 - Resources Window

The Project window contains 5 different tabs, each one is detailed below.

5.1 Project Information Tab

The project information tab is where you can enter all of the general project information. You will be required to enter a name for your project, name of the company, your PPN contact information, and you will be able to define your utility rate for the project. There are several pre-defined rates that you can select, but you can also enter a custom rate.

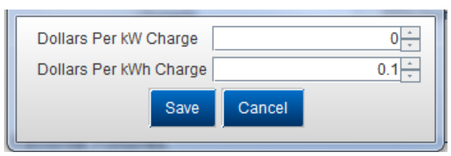

Figure 17 - Custom Rate

If you define a utility rate, the Reports Tab will contain information about annual bill savings as well as estimated payback.

5.1.1 Favorite Fixtures

Your favorite fixtures are synced with your user name. Anytime you make changes to your favorite fixtures, you'll be able to have those changes follow you from each project. You can edit your favorite fixtures list at any time by clicking the Edit Favorites button on the Project Information Tab.

When you click the Edit Favorites button, you will be taken to the Favorite Fixtures window. The window will let you quickly filter to exactly the light fixture that you're looking for and add it to your list of favorite fixtures. Your list of favorite fixtures will be available to you as you select upgrades for your project. Any fixtures to be used for a particular project will have to be added to the favorites list in order to be able to select them on the Preliminary Assessment and As Installed tabs.

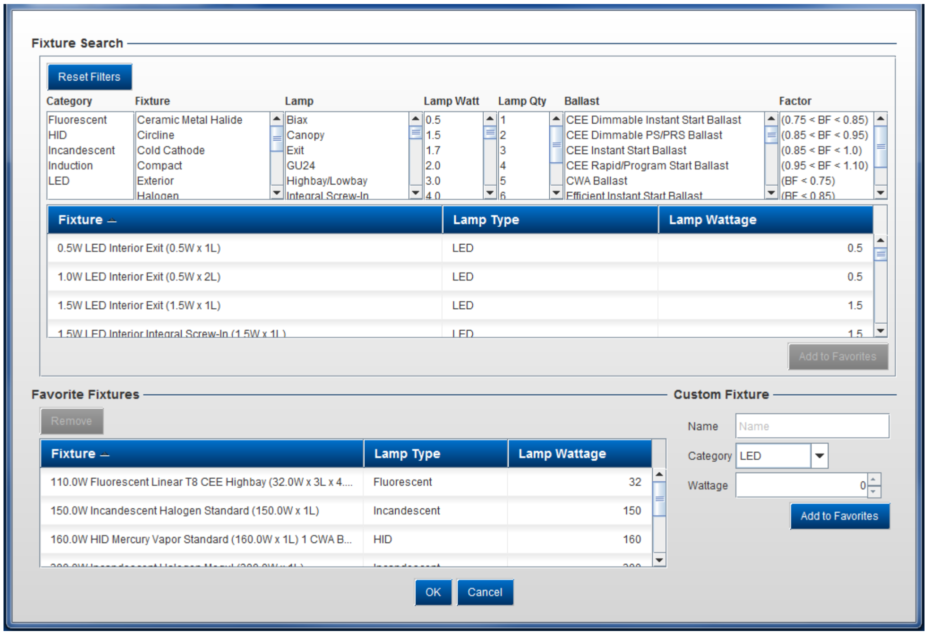

Figure 18 - Favorite Fixture

The top half of window is your filter so you can quickly find the light fixtures you need. To use the filter, simply click on any of the items in any of the columns. The filter will automatically hide the non-applicable values. You can also multi-select by using the "Shift" or "Ctrl" keys on your keyboard. The image below shows filtering the fixtures.

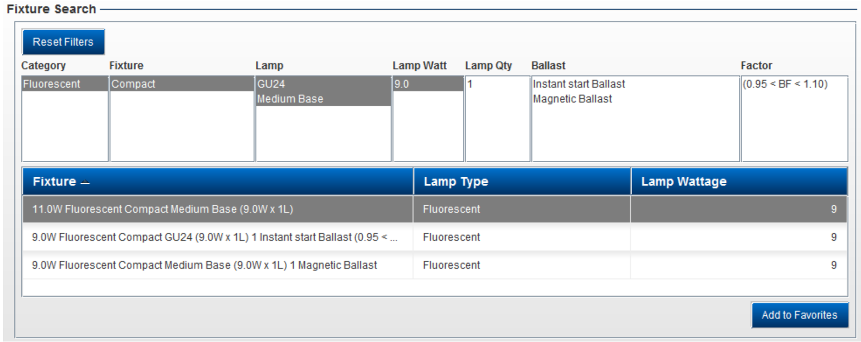

Figure 19 - Fixture Filter

Once you find the fixture that you want to save, simply highlight the fixture and click “Add to Favorites”. All of your favorite fixtures are displayed in the scrollable list at the bottom of the window (Figure 20). Fixtures can be added or removed from your favorite list at any time and your list will be downloaded to your computer automatically every time you log in.

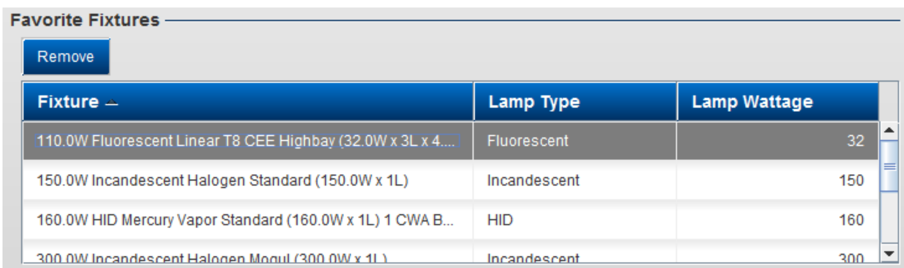

Figure 20 - Favorites List

If you have edited your favorite list while you are offline, you will presented with a dialog to sync your favorites with those that are on the server the next time you log in. Your choices are shown in the figure below.

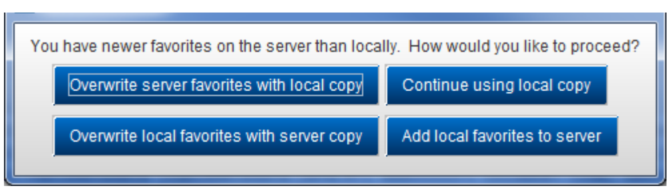

Figure 21 - Syncing Your Favorites

This will enable you to have your most recent favorites where ever you are. Your favorites list contains all of the important fixtures for your projects. It is the list of favorite fixtures that are selectable when you are entering measures during the Preliminary Assessment and the As Installed phases of the project.

If you forget to add a fixture to your favorites list, you can also do it from the Preliminary Assessment and the As Installed phase tabs.

Your favorite fixture window will also give you the ability to create a custom fixture. You will be able to give your fixture a name, select a fixture incentive category and select the correct fixture wattage.

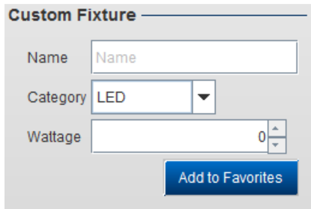

Figure 22 - Custom Fixture

Note: Please ensure that your custom fixture follows the rules for your program. Information about custom fixtures and program rules can be found in the Resources link.

5.2 Building Information Tab

The Building Information Tab is where you define all important building properties. You will enter the building name, address, and also input the point of contact information for the building (Figure 23).

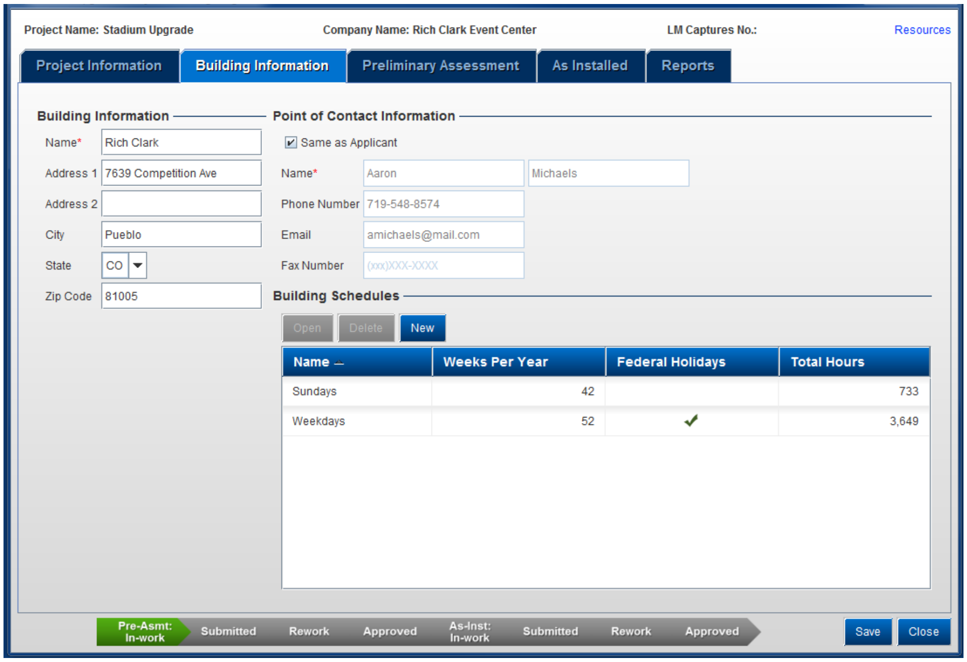

Figure 23 - Building Information Tab

5.2.1 Building Schedules

You can define custom operating schedules for your building for the sake of determining the savings the customer might see on their electric bill. You will be able to quickly build any schedule for your building by clicking **New** in the Building Schedules section of the screen.

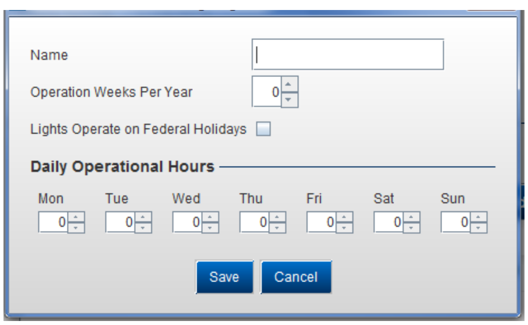

Figure 24 - New Schedule

You will be required to give your schedule a name, and define the number of weeks per year that it will operate, if the lights will operate on federal holidays, and the hours per day. You will be able to select from your schedules for the Preliminary Assessment and As Installed phases.

5.3 Preliminary Assessment Tab

The Preliminary Assessment Tab is where you'll enter your initial assessment for the project. As part of the Preliminary Assessment you will add rooms to your building and define the material, labor, and other associated costs. You will also select the time zone and the weather station for your area (Figure 25).

Note: The time zone and weather station are required to calculate your incentive. Your incentive calculation will read $0 until you select a weather station and time zone.

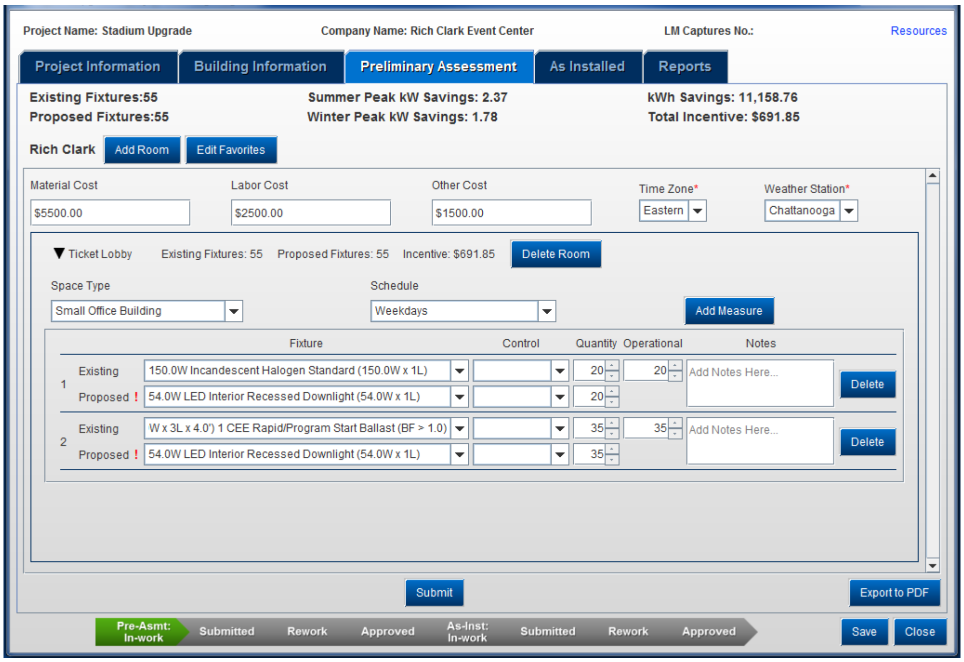

Figure 25 - Preliminary Assessment Tab

It will also be required for you to select a space type once you have created a room. The space type determines the hours of operation that will be used to determine the incentive for the measures of that room. The space type that should be selected will be the one that best describes the building that the room is in. The schedules that you defined in the Building Information tab (Section 5.2.1) will be selectable from the drop down menu.

As mentioned in Section 5.1.1, you can edit your favorite fixtures from the Preliminary Assessment tab by clicking the **Edit Favorites** button, which opens the favorite fixtures window.

5.3.1 Adding and Deleting Rooms

When you are creating your project, you will add rooms to the building by clicking the Add Room button.

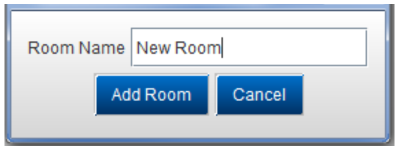

Figure 26 - Add Room

You will give your room a name and hit **Add Room** button. Once you do this, your new room will show up in the room frame (Figure 27). Right next to the room name is summary information about the room.

Note: Please be cautious deleting a room as this action cannot be undone.

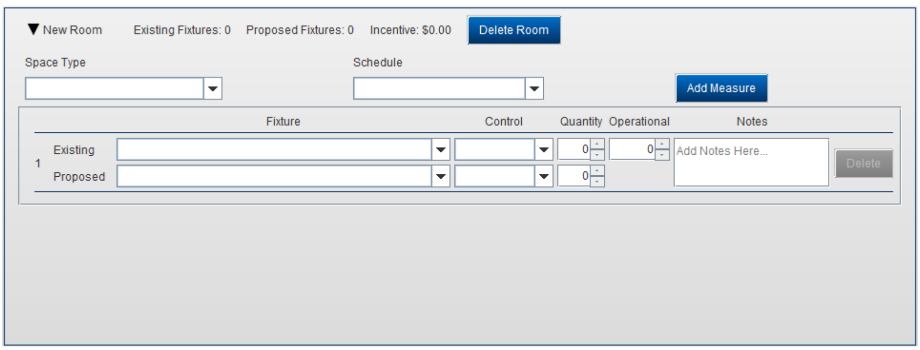

Figure 27 - Room Frame

You can also collapse any room to help manage large projects and see a summary for all of your rooms. This is done by clicking the black triangle next to the room name (Figure 28).

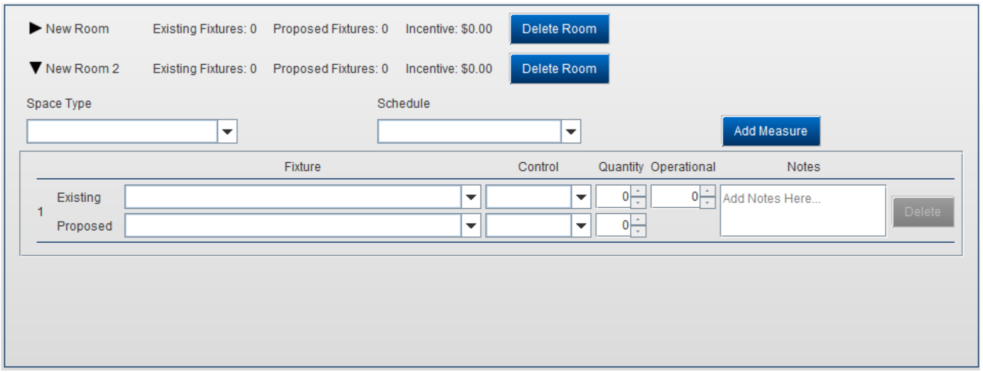

Figure 28 - Collapsed Room List

Within the room frame there are several fields that you will need to populate with the first two being the Space Type and the room Schedule. If you need to update or add a new schedule to your list of schedules, it can be done through the Building Information Tab (Section 5.2.1).

5.3.1.1 Adding Measures

When you first add a room, it will have a blank measure listed. From the dropdown menu add the existing equipment installed and what you are proposing as upgrades. The light fixtures selectable are from your favorite fixtures list.

Note: It can be helpful to plan out the fixtures that you are going to use in the project so you can add them to your favorite fixtures list prior to starting the Preliminary Assessment.

Each time you click the Add Measure button, it will add another row for you to populate. All calculations and totals are updated dynamically and you will see a running total for your rooms and your project. The example below shows a room with multiple measures added.

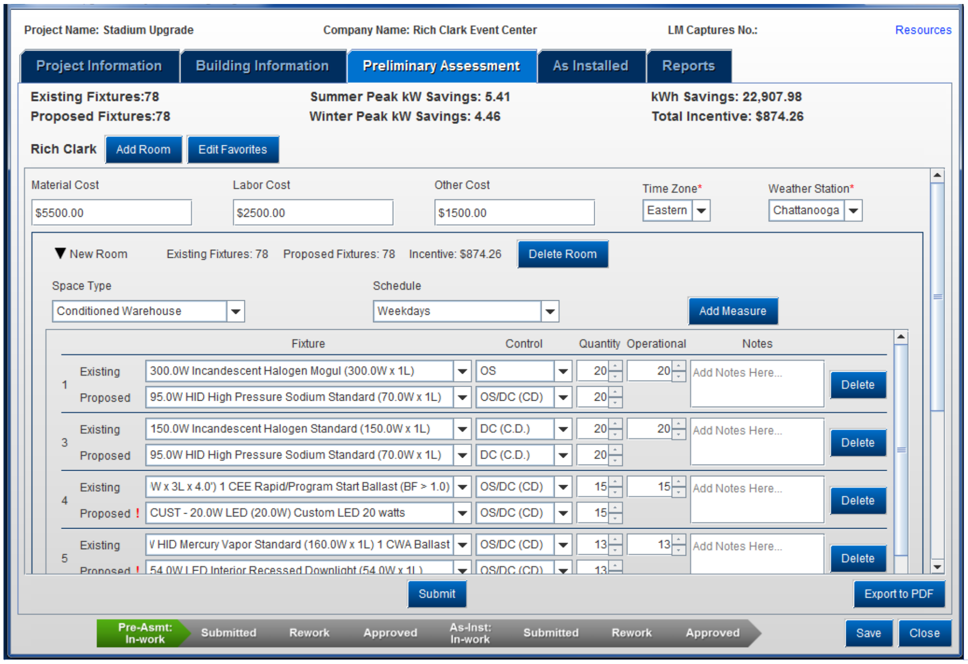

Figure 29 - Multiple Measures

Note: Please be cautious when deleting a measure as this cannot be undone.

Any notes or cautions are designated by a red (!) shown next to the measure. If you hover over the exclamation mark with your mouse you can read the note or caution. Program specific information can be found in the **Resources** link at the top right.

5.3.2 Exporting Measure List to .PDF

A PDF of the scope for the purposes of sharing the extent of the project or for assistance in reconciling invoices is available. The PPEC gives you the ability to create a PDF report with a summary of the Preliminary Assessment phase and the As Installed phase. Before pressing the **Export to PDF** button, you can choose if you want to make a file with the originally submitted scope or the current/approved scope. One the **Export to PDF** button is pressed, you will be prompted to specify where you would like to save the file. You will also have the opportunity to give the report a custom name.

5.3.3 Submitting a Project for the Preliminary Assessment Phase

After you have completed the Preliminary Assessment phase, you will be able to submit the project for review and approval by a EnergyRight program approver. Once the project is submitted it will no longer be editable by the PPN. The project can still be opened as read only.

David Gajewski 11/25/2014 5:21 PM
Comment [3]: This needs to be updated with the radial toggles at the top right

Note: The project will remain read only until it is approved or sent back for rework.

5.4 Approval Process

5.4.1 Projects Returned for Rework for the Preliminary Assessment Phase

When a project is sent for rework, the project is checked in again for the PPN to edit. The project state will be changed to Preliminary Assessment: Rework (Section 4.4.3). When a PPN receives a project for rework, they will see the items or notes added and changed by the approver. They will be able to make their changes and corrections and resubmit the project for approval.

5.4.2 Ability to See Changes Made

You have the ability to see what was originally submitted as well as the current state of each phase of a project. The toggle radio buttons are located at the top right of the screen.

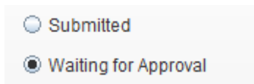

Figure 30 - Approval Toggle

Note: After a project is approved, these toggle buttons will say "Submitted" and "Approved", you will be able to quickly switch and see the differences between what was submitted and what was approved.

Any changes that are made to a submitted project will be highlighted. This is to help distinguish between what was originally submitted and what was changed by the approver.

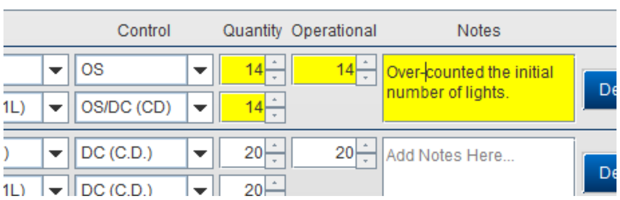

Figure 31 - Approver Edits

The EnergyRight program approver has the ability to edit the submitted Preliminary Assessment and then approve the project, or make changes and send the project for rework.

The EnergyRight program approver can also delete or add rooms or measures to submitted projects. If a new room is added, all of the associated fields will be highlighted (Figure 32).

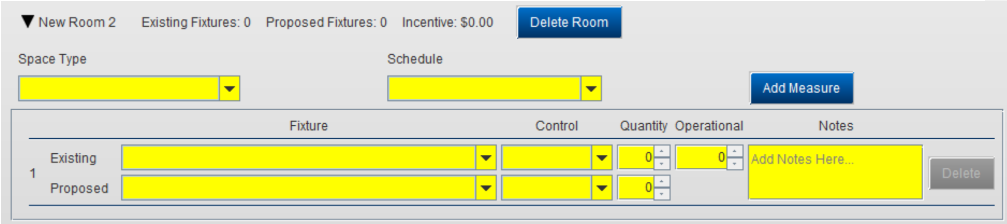

Figure 32 - Added Room

If a room is or a measure is deleted by the approver after the project is submitted, it will be highlighted and will also include hash marks indicating the room or measure has been deleted .

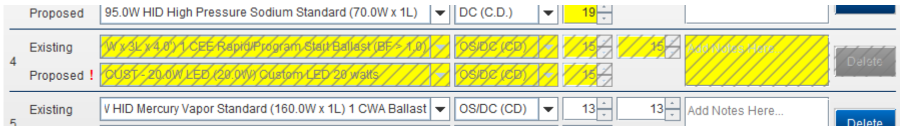

Figure 33 - Deleted Measure

Once the Preliminary Assessment is approved it is locked from any more changes. It can only be viewed as read only. At this point, the project moves into the As Installed phase. You will be able to toggle between what was originally submitted and what was ultimately approved.

Note: The very first submission of the project is saved for historic purposes even if the project was sent for rework and resubmitted.

5.4.3 Preliminary Assessment Tab in Offline Mode

In the offline mode, you will be able to edit and save your changes to the projects that you have downloaded before going offline. If you have created a new project while offline, it will not be visible to other users within your PPN company until you have checked it in while connected to the internet. You will not be able to submit a project if you are offline.

5.5 As Installed Tab

The As Installed phase can only be started after the Preliminary Assessment has been approved. If the Preliminary Assessment has not been approved you will be presented with the following screen upon navigating to the As Installed tab.

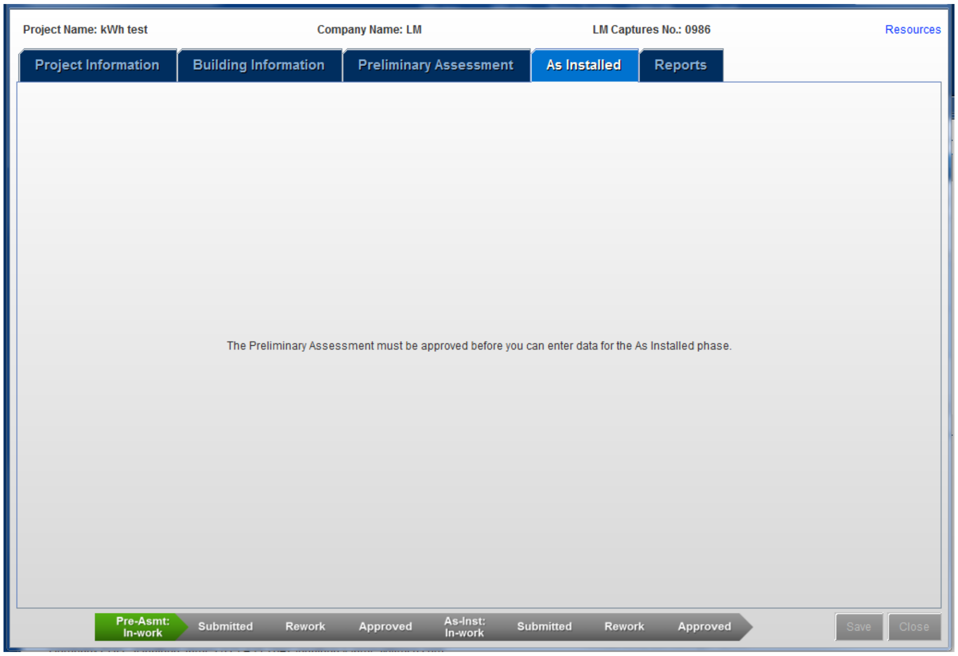

Figure 34 - As Installed Tab - Cannot Start

Once the Preliminary Assessment has been approved, the As Installed Tab can be accessed. The application will automatically copy the contents of the approved Preliminary Assessment into the As Installed tab.

The As Installed tab functions identically to the Preliminary Assessment tab. The primary difference being when you change values from the approved Preliminary Assessment values, they will be highlighted in yellow.

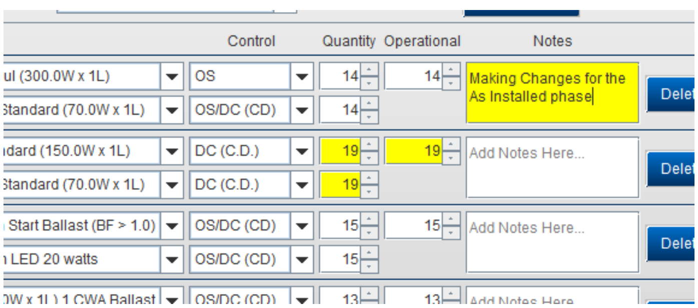

Figure 35 - As Installed Changes

When you have completed the As Installed phase, you will submit the project for approval just as in the Preliminary Assessment phase. All of the behavior that was seen in the Preliminary Assessment is the same in the As Installed Tab.

5.6 Report Tab

The Report tab has all of the summary information for your project. All of the calculations are updated dynamically as you update the information on the Preliminary Assessment and As Installed tabs.

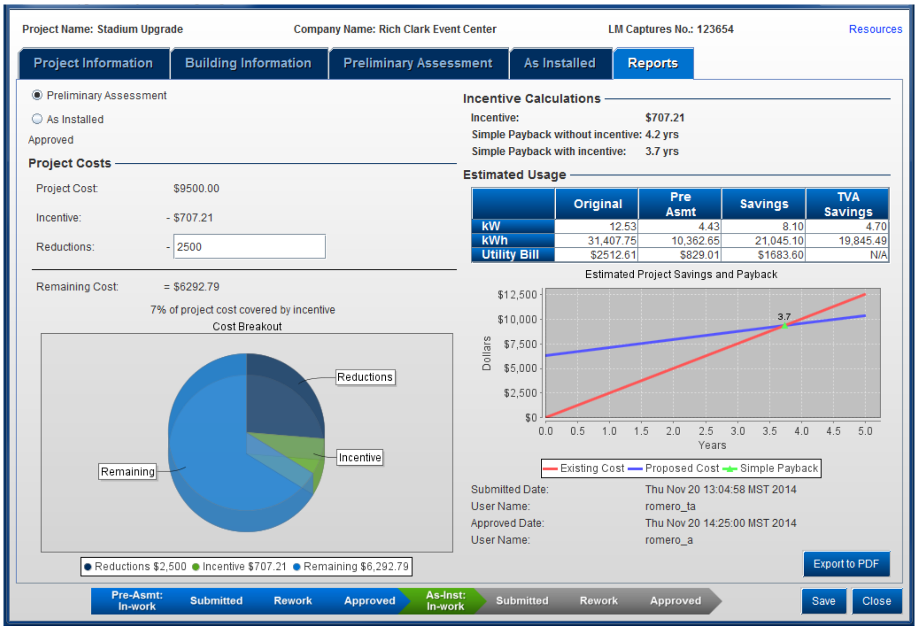

Figure 36 - Report Tab

You can quickly toggle between the different phase of your project. If you have submitted your project and it has been approved, you can switch between Preliminary Assessment and As Installed.

Note: The Report tab will show the most updated information for a project phase.

You will be able to enter any additional reductions (i.e. grants or other upfront funding sources) that may be available for your project. It will update the pie chart below and also the payoff chart on the right side of the window.

The application will also show the user name and date when the project was submitted and approved in the bottom right side of the screen.

5.6.1 Export the Report to .PDF

You can, at any time, export the report to a PDF file. You will have the opportunity to rename the file and save it to any folder on your computer. The version of the report will be based upon what you have selected in the Report Tab.

6. References

Below is a list of important websites for the PPEC.

LED Qualified Products List and Submission
https://www.lightingdesignlab.com/led-qualified-products-list-and-submission

Commercial LED Lighting
http://www.energystar.gov/index.cfm?c=ssl.pr_commercial

Qualified 4ft T8 Fixtures Products List
http://www.designlights.org/qpl

Consortium for Energy Efficiency
http://www.cee1.org/content/cee-program-resources